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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,949	08/26/2003	Kurt Bollacker	NG(MS)-6692	3724

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EXAMINER
BROWN JR, NATHAN H

ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 07/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	10/647,949	BOLLACKER ET AL.
Office Action Summary	Examiner	Art Unit	
	Nathan H. Brown, Jr.	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *(3)* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 April 2006*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,12-16,18-22,29-34* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6,7,10,13-16,20,22,24,26 and 27* is/are rejected.

7)☒ Claim(s) *4,5,8,9,11,12,17-19,21,23,25,28, and 29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Examiner's Detailed Office Action

1. This Office is responsive to the communication for application 10/647,949, filed April 24, 2006.

2. Claims 1-10, 12-16, 18-29, and 29-34 have been examined and it is noted that: claims 1, 13, 14, 16, 18, 19, 22, and 26 have been amended; claims 11, 17, and 28 have been cancelled; claims 2-5, 6-10, 12, 15, 20, 21, 23-25, 27, and 29 remain in their original form; and new claims 30-34 have been added. Any decision with regards to the patentability of claims 30-34 is held in abeyance pending applicant's response to the enclosed letter of Tim van Gelder.

3. After the first office action, claims 1-3, 6, 7, 10, 13-16, 20, 22, 24, 26, and 27 stand rejected; claims 13, 14, and 26 are objected to for minor informalities; and claims 4, 5, 8, 9, 11, 12, 17-19, 21, 23, 25, 28, and 29 are objected to as being dependents of rejected base claims.

Claims 1, 10, 12, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by *Chryssafidou*, "DIALECTIC: Enhancing essay writing skills with computer supported formulation of argumentation", 1999.

Regarding claim 1. *Chryssafidou* teaches a system (*see* Abstract) for editing and displaying a structured argument (*see* p. 10, Fig. 6), having a plurality of associated parameters (*see* p. 10, Fig. 6, *Examiner interprets: claim, argument, support, refute, conjunction, and opposed claims*

(show in the screen shot key) to be a plurality of associated parameters of a structured

argument.), the system comprising: a user interface that graphically displays the plurality of

parameters at a user accessible display and receives input from a user defining the value of a

selected parameter (*see* p. 10, Fig. 6); and a computational engine that alters the selected

parameter to the defined value, updates the plurality of parameters according to the defined value

of the selected parameter, and provides the altered parameters to the user interface, such that the

display is updated in real time to reflect the user input (*see* Abstract, *Examiner interprets*

DIALECTIC to be the computational engine.).

Regarding claim 10. *Chryssafidou* teaches the system of claim 1, being implemented as

computer executable instructions on a computer readable medium (*see* Abstract).

Regarding claim 12. *Chryssafidou* teaches the system of claim 1, the plurality of parameters

defining an argument model (*see* p. 6, "The model of pragma-dialectic approach to

argumentation suggests heuristic functions indicating what moves[6] should be undertaken in

resolving a difference of opinion. These are central in the research that underpins the design of

Dialectic." and *see* p. 10, Fig. 6, *Examiner interprets: claim, argument, support, refute,*

conjunction, and opposed claims (show in the screen shot key) to be a plurality of associated

parameters of an argument model.).

Regarding claim 26. *Chryssafidou* teaches a system (*see* above) for editing and displaying a

structured argument (*see* above), comprising a plurality of parameters (*see* above), comprising:

means for graphically displaying the plurality of parameters, each having an associated value

(*see* above); means for receiving input from a user, the input comprising a request to modify

respective values of at least one selected parameter from the plurality of parameters (*see* p. 10,

Fig. 6, "**Tools palette**: This is the main feature of the drawing area where the user designs the

argumentation using text boxes, graphic arrows and links."); means for modifying the values of

the at least one selected parameter and at least one other parameter from the plurality of

parameters (*see* p. 10, Fig. 6, *Examiner asserts that Fig. 6 shows the palette of modifiable objects*

representing the parameters of the argument.); and means for updating the modified parameter

values at the means for displaying in real time in response to the user input (*see* p. 10, Fig. 6,

"**Tools palette**: ..." and "The system feedback: The system provides feedback on the structure of

the arguments –not

the content of them- only by request.", *Examiner asserts that the system places the feedback in*

the commenting area.).

Claims 2-3, 6-7, 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Chryssafidou*

in view of *SYSTAT*, "TableCurve 2D GENERAL FEATURES", 2002.

Regarding claim 2. *Chryssafidou* teaches the system of claim 1. *Chryssafidou* does not teach the

plurality of parameters comprising respective confidence values for a plurality of hypotheses.

SYSTAT does teach the plurality of parameters comprising respective confidence values for a

plurality of hypotheses (*see* §Data Input, "Up to 65,536 points in data table", *Examiner asserts a*

data table is capable of storing a plurality of parameters comprising respective confidence

values for a plurality of hypotheses where the plurality of parameters comprising respective

confidence values for a plurality of a hypothesis are stored in a row.). It would have been

obvious at the time the invention was made to persons having ordinary skill in the art to combine

Chryssafidou and SYSTAT to visualize their data, increase their analytical power with statistics,

and completely automate their analysis (*see* SYSTAT, "Overview").

Regarding claim 3. *Chryssafidou* teaches the system of claim 1. *Chryssafidou* does not teach at

least one confidence value being displayed to a user via a first, qualitative indicator and a second,

quantitative indicator. SYSTAT does teach at least one confidence value being displayed to a

user via a first, qualitative indicator and a second, quantitative indicator (*see* §Data Input, "Up to

65,536 points in data table", *Examiner asserts a data table can support at least one confidence*

value being displayed to a user via a first, qualitative indicator and a second, quantitative

indicator where the qualitative indicator is a character string in a character in the first cell of a

column (e.g., attribute name) and the quantitative indicator is a numeric value in numeric cells

below the first cell in a column (e.g., attribute data).). It would have been obvious at the time

the invention was made to persons having ordinary skill in the art to combine *Chryssafidou and*

SYSTAT to visualize their data, increase their analytical power with statistics, and completely

automate their analysis (*see* SYSTAT, "Overview").

Regarding claim 6. *Chryssafidou* teaches the system of claim 1. *Chryssafidou* does not teach the

plurality of parameters comprising a plurality of influence parameters, the influence parameters

representing the degree of logical relatedness between respective associated first and second

hypotheses. SYSTAT does teach the plurality of parameters comprising a plurality of influence

parameters, the influence parameters representing the degree of logical relatedness between

respective associated first and second hypotheses (*see* §Data Input, "Up to 65,536 points in data

table", *Examiner takes Official Notice that a data table can represent the plurality of parameters*

comprising a plurality of influence parameters, the influence parameters representing the degree

of logical relatedness between respective associated first and second hypotheses by forming a

matrix of the Cartesian product of hypotheses where each cell, F_{ij}, represents the influence of

hypothesis j on hypothesis i. As evidence of this fact, Examiner cites page 425 of Russell and

Norvig, "Artificial Intelligence: A Modern Approach (2nd Edition)", 2002, wherein the figure on

this page shows a data table with hypotheses and a matrix of parameters of degree of logical

relatedness.). It would have been obvious at the time the invention was made to persons having

ordinary skill in the art to combine *Chryssafidou and SYSTAT* to visualize their data, increase

their analytical power with statistics, and completely automate their analysis (*see* SYSTAT,

"Overview").

Regarding claim 7. *Chryssafidou* teaches the system of claim 1. *Chryssafidou* does not teach at

least one influence parameter being displayed to a user via a first, qualitative indicator and a

second, quantitative indicator. SYSTAT does teach at least one influence parameter being

displayed to a user via a first, qualitative indicator and a second, quantitative indicator (see

above, *Examiner takes Official Notice (see above) that the qualitative indicators are formed by*

adding an extra row and column to the matrix described above where the row and column

contain character values that indicate the hypotheses associated with the quantitative influence

parameter, F_{ij}). It would have been obvious at the time the invention was made to persons

having ordinary skill in the art to combine *Chryssafidou and SYSTAT* to visualize their data,

increase their analytical power with statistics, and completely automate their analysis (*see*

SYSTAT, "Overview").

Regarding claim 27. *Chryssafidou* teaches the system of claim 26. *Chryssafidou* teaches the

means for displaying comprising means for qualitatively displaying the value of the plurality of

parameters (*see* p. 5, Figs. 1-3, *Examiner interprets "supports", "refutes", "standpoint", and*

"argument" as a plurality of parameters.). *Chryssafidou* does not teach the means for

quantitatively displaying the value of the plurality of parameters. However, *SYSTAT* does teach

the means for quantitatively displaying the value of the plurality of parameters (*see* §Data Input,

"Up to 65,536 points in data table", *Examiner interprets "points" to be a plurality of*

quantitative parameter values.). It would have been obvious at the time the invention was made

to persons having ordinary skill in the art to combine *Chryssafidou and SYSTAT* to visualize their

data, increase their analytical power with statistics, and completely automate their analysis (*see*

SYSTAT, "Overview").

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Chryssafidou* in view of

Murphy, "A Brief Introduction to Graphical Models and Bayesian Networks", 1998.

Regarding claim 13. *Chryssafidou* teaches the system of claim 12. However, *Chryssafidou* does

not teach the argument model represented by a Bayesian belief network. Murphy teaches the

argument model as a Bayesian belief network (*see* p. 2, §Representation, *"Examiner interprets*

the random variables to be hypotheses."). It would have been obvious at the time the invention

was made to persons having ordinary skill in the art to combine *Chryssafidou and Murphy* in

order to provide reasoning under uncertainty.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Chryssafidou* in view of

Wang, "A Prototype Belief Network-based Expert System Shell", 1990.

Regarding claim 14. *Chryssafidou* teaches the system of claim 12. However, *Chryssafidou* does

not teach the argument model represented by a Dempster-Shafer belief network. *Wang,*

however, does teach the argument model as a Dempster-Shafer belief network (*see* p. 510, §2.

BELFUN System Architecture and Knowledge Base Construction, "BELFUN incoperates the

Dempster-Shafer theory of belief functions, belief propagation schemes..."). It would have been

obvious at the time the invention was made to persons having ordinary skill in the art to combine

Chryssafidou and Wang in order to provide reasoning under uncertainty.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Chryssafidou* in view of

Thompson et al., "AnnotatedHyperIbisDtd (DRAFT)", 2003.

Regarding claim 15. *Chryssafidou* teaches the system of claim 12. However, *Chryssafidou* does

not teach the use of an Extensible Mark-up Language (XML) schema. *Thompson et al.* do teach

the use of an Extensible Mark-up Language (XML) (*see* §HyperIBIS Examples and §Markup

declarations for HyperIBIS DTD family). It would have been obvious at the time the invention

was made to persons having ordinary skill in the art to combine *Chryssafidou and Thompson et*

al. to use a DTD which enables the results of reasoning about evidence to propagate through a

network where the network may take any form from a small intranet-based collaboratory to the

entire Internet.

Claims 16, 20, 22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

HALLoGRAM, "PrecisionTree", 2000 in view of *SYSTAT*.

Regarding claim 16. *HALLoGRAM* teaches a method for determining the sensitivity of a

hypothesis of interest to a parameter within an argument model (*see* §Sensitivity Analysis,

Examiner interprets a decision to be a hypothesis.), comprising: providing a continuous

mechanism for a user to modify the parameter, such that the user can make multiple

modifications to the parameter in rapid sequence (*see* §Sensitivity Analysis, "PrecisionTree

modifies the values of the sensitivity variables you specify and records the changes in the

expected value of the tree."). *HALLoGRAM* does not teach updating a confidence value

associated with the hypothesis of interest in response to the modification of the parameter or

altering a display of the confidence value of the hypothesis of interest in real time to match the

updated confidence value in response to each modification of the parameter. However, *SYSTAT*

does teach updating a confidence value associated with the hypothesis of interest in response to

the modification of the parameter (*see* §Data Management, "Spreadsheet-like data editing with

optional graphing of data as they are entered", *Examiner asserts that modifying the parameter*

value associated with a confidence value of a hypothesis of interest updates the confidence value

and all references to it.); and altering a display of the confidence value of the hypothesis of

interest in real time to match the updated confidence value in response to each modification of

the parameter (*see* §Data Management, "Spreadsheet-like data editing with optional graphing of

data as they are entered", *Examiner asserts that the spreadsheet alters a display of the*

confidence value of the hypothesis of interest in real time (by iteration) to match the updated

confidence value in response to each modification of the parameter.). It would have been

obvious at the time the invention was made to persons having ordinary skill in the art to combine

HALLoGRAM and SYSTAT to obtain the means to perform decision analysis in addition to

exploratory data analysis.

Regarding claim 20. *HALLoGRAM* teaches the method of claim 16. *HALLoGRAM* does not

teach the parameter comprising a confidence value associated with a contributing hypothesis

within the structured argument. *SYSTAT* does teach the parameter comprising a confidence value

associated with a contributing hypothesis within the structured argument (*see* §Data Input, "Up

to 65,536 points in data table", *Examiner asserts a data table may represent the parameters*

comprising a confidence value associated with a contributing hypothesis within the structured

argument where each row represents a confidence value and each column represents a

parameter comprising the confidence value.). It would have been obvious at the time the

invention was made to persons having ordinary skill in the art to combine *HALLoGRAM and*

SYSTAT to perform decision analysis in addition to exploratory data analysis.

Regarding claim 22. *HALLoGRAM* teaches the method of claim 16. *HALLoGRAM* does not

teach the structured hypothesis comprising at least two contributing hypotheses, the parameter

comprising an influence value associated with a logical relationship between the two

contributing hypotheses. *SYSTAT* does teach the parameter comprising a confidence value

associated with a contributing hypothesis within the structured argument (*see* §Data Input, "Up

to 65,536 points in data table", *Examiner asserts a data table may represent the structured*

hypothesis comprising at least two contributing hypotheses, the parameter comprising an

influence value associated with a logical relationship between the two contributing hypotheses

by forming a matrix of the Cartesian product of hypotheses where each cell, F_{ij}, represents the

influence of hypothesis j on hypothesis i and each row contains a least two entries.). It would

have been obvious at the time the invention was made to persons having ordinary skill in the art

to combine *HALLoGRAM and SYSTAT* to perform decision analysis in addition to exploratory

data analysis.

Regarding claim 24 *HALLoGRAM* teaches a method computer readable medium having

computer executable instructions for performing the method of claim 16 (see §Overview,

"PrecisionTree is the Decision Analysis Add-In for Microsoft Excel.", *Examiner interprets an*

Add-In to be a computer readable medium (i.e., file).).

4. The Office directs the Applicants' attention to the attached letter and list of "Allowable"

claims and requests responses to all points raised therein.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Nathan H. Brown, Jr. whose telephone number is 571-272- 8632. The

examiner can normally be reached on M-F 0830-1700. If attempts to reach the examiner by

telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571-

272-3687. The fax phone number for the organization where this application or proceeding is

assigned is 703-872-9306. Information regarding the status of an application may be obtained

from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

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information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions

on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-

9197 (toll-free).

Anthony Knight
Supervisory Patent Examiner
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Nathan H. Brown, Jr.
July 18, 2006